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ADDRESS

OF

EARL STANHOPE,

PRESIDENT

OF

The Medico-Botanical Society,

FOR THE

ANNIVERSARY MEETING,

JANUARY 16, 1830.

London :

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1830.

At a General Meeting of the MEDICO-BOTANICAL SOCIETY OF LONDON, holden on Tuesday the 9th day of February, 1830,—It was moved by Sir HENRY HALFORD, Bart. M.D. K.C.H. F.R.S. F.S.A. &c. President of the Royal College of Physicians, and Vice-President of this Society, and seconded by Sir JAMES M'GRIGOR, M.D. K.T.S. K.C. F.R.S. F.R.S.E. &c. Director-General of the Army Medical Board,

AND RESOLVED UNANIMOUSLY,

THAT the cordial Thanks of this Society be offered to the President, EARL STANHOPE, for his very valuable and useful Address to the Society, and that his Lordship be requested to allow the same to be printed for distribution amongst the Members of the Society.

HUMPHREY GIBBS,
GEORGE G. SIGMOND, M.D. } *Secretaries.*

London, February 9th, 1830.

ADDRESS
OF
EARL STANHOPE,
PRESIDENT
OF
THE MEDICO-BOTANICAL SOCIETY,
FOR THE
ANNIVERSARY MEETING,
January 16th, 1830.

GENTLEMEN,

THE return of the Anniversary imposed upon you, in conformity with your Bye-Laws, the duty of electing a Council and Officers for the ensuing year, and in the discharge of that duty you were pleased again to confer upon me the high and honorable office of President of this Society. I feel and acknowledge most gratefully the kindness and favorable opinion of which you have thus afforded me an additional proof; I am, as I ought to be, most anxious to enjoy your confidence, and to promote your interests; and I rejoice that you have considered me deserving of the former, and zealously attached to the latter. Allow me, however, to express my regret, that you have not selected for your President a person who, by his scientific attainments and medical experience, would be more qualified than myself to do justice to your choice; and my regret is proportioned to the sense which I

entertain of the magnitude and importance of the objects that are pursued by this Society, and of the benefits which mankind will derive from the success of your inquiries. I am aware that I am indebted to your partiality for the honor which you have bestowed upon me, and I earnestly hope that the same feelings which influenced your decision will induce you to view with indulgence any imperfections that may be found in the performance of my duties, which I shall ever be most desirous of discharging with assiduity and zeal, and, as far as my humble abilities will allow, with advantage to this Society, the prosperity of which I have so much at heart.

I should on this occasion feel particular pleasure and satisfaction in descanting upon the distinguished honor which this Society received, during the course of last year, by the accession of many Sovereigns, who cast so much lustre upon the List of our Members, and who, by their gracious protection, as well by the influence of their example, have eminently promoted our designs and encouraged our exertions. Our designs are not of a selfish or exclusive nature, but are directed to an object which is most beneficial to all the nations of the earth,—the relief of suffering humanity, by extending and improving the knowledge of those vegetable substances which may be employed as medicines. In the prosecution of those designs we derive very great advantage and assistance from the communications which we have had the happiness of establishing, not only with our Corresponding Members, many of whom are illustrious from their talents and acquirements, but also with several learned Societies abroad which pursue objects that are closely allied to our own. We have reason to hope that very valuable results will be derived from these communications, and we have the

gratification of knowing that the Society has, during the last year, enjoyed, in that respect, new and very important facilities. I will not at present occupy your time by repeating what has already been very fully stated to you on the subject of the intercourse which has been formed with this Society ; and for the same reason, I might be relieved from the painful duty of commemorating the merits and services of those Members, of whom Death has deprived us during the last year.

We have thus lost the assistance of Dr. James Dunlap, a most worthy Member of his Profession ; of his second Son, who was employed by the East India Company in the medical department, and was a Corresponding Member of this Society, to which he might have been of very great service ; and of Dr. John Fleming, who had acquired a high reputation by his valuable writings on the *Materia Medica* of the East Indies. We have deeply to deplore the death of a very eminent Botanist, the Chevalier de la Marck, a Member of the French Institute, and Professor of the Royal Museum of Natural History, who was the author of the botanical part of the *Encyclopedie Methodique*, and who, with Mr. A. P. De Candolle, took an extensive share in the first edition of the *Flore Française*, a work that clearly illustrates the practical utility of the natural arrangement of Plants, which was, by Linnæus himself, termed the “ *ultimus finis Botanices*.” The death of another Member of the French Institute, M. Vauquelin, is very afflicting to this Society, which justly admired his talents and fully appreciated his important discoveries in chemistry, and the great success with which he applied it to pharmaceutical preparations. The services which he rendered to science are so well known to you, that they do not require to be again brought under your view, and

indeed they are too numerous to be detailed on this occasion.

In vain would I attempt to offer a tribute of respect which must be inadequate to the memory of Sir Humphrey Davy, whose very name conveys a greater eulogium than any praise which it would be in my power to bestow. Amongst all the qualities which adorned that illustrious person, who was so deservedly chosen President of the Royal Society, and continued to enjoy that high honor till declining health compelled him to resign it, there is none which appears to me more entitled to commendation than the practical utility of his scientific pursuits. May it always be remembered that practical utility is the object of our institution, and ought to be constantly in our view; that it should direct as well as animate our proceedings, and that it should urge us to emulate, as far as we are able, the example of those who have rendered services to mankind.

We have had the gratification of finding, from the Reports which have been made to us, that 43 Fellows have, in the course of last year, been added to our number; and the Society has, amongst other donations, had the honor of receiving, from His Majesty the King of Wirtemberg, a Collection of the Plants which are indigenous to his Dominions; and is indebted to the gracious munificence of His Majesty the King of Naples, for the *Flora Neapolitana*, and other very valuable Works. The Duke of Northumberland has had the kindness to present to us the very expensive and magnificent Work of Redonté on the *Liliacées*; and the Viscount Strangford, whose intimate friendship I have long had the happiness of enjoying, sent to you, from the Brazils, though he was not at that time a Fellow of this Society, a collection of the most rare and

curious Seeds, some of which are, in this country, quite unique. From Mr. Lambert, who is so eminently distinguished as a Botanist, you received a Collection of Guiana Plants; from Mr. Charles Fischer, of Berne, a Collection of scarce Alpine Plants; from Mr. Blythe, of Christiana, a Collection of Norwegian Plants; and from the Royal Asiatic Society, a Collection of very interesting specimens of the Javanese Materia Medica, which have been described by Dr. Waitz. Among them are the *SWIETENIA febrifuga*, the name of which explains its use; the *PSIDIUM pyrifera* and the *GARCINIA Mangostana*, which are Tonics; and the *ALYXIA Reinwardti*, the *LAURUS Burmanni*, and species of *CELTIS*, which are Antispasmodics; and Dr. Waitz has given formulas, directing the manner in which they ought to be administered. We have also to thank M. Otto, of Berlin, and Dr. Fischer, of St. Petersburg, for some Collections of Seeds which they had the goodness to send to us. The encouragement which has thus been afforded to us, while, on the one hand, it demands our warmest thanks, ought, on the other, to stimulate our exertions in endeavouring, collectively as well as individually, to deserve the patronage and protection with which we have been honored, and to prosecute with patience and perseverance the important and beneficial objects for which we are united.

In bringing again under your notice the Papers which were read before this Society in the course of the last year, I will, with your permission, make a few observations upon their contents, not with any intention of criticising their matter, nor with the expectation of adding any information to that which they furnish, but from the wish of calling your attention to some circumstances which are either mentioned in those Papers or omitted in them, and upon which further inquiries may appear desirable.

The Cavaliere Tenore, Professor of Botany at Naples, has communicated to us a very interesting Paper, which had been published in the Transactions of the Royal Institution for the encouragement of Natural Sciences, respecting a Tree, of which the Bark is used, with great success, by the Calabrians, for the cure of intermittent Fevers. The Tree belongs to the Genus of PRUNUS, its popular appellation is *Cucumiglia*, and its botanical description is given by the Author, who states that it is mentioned as a new Species in the works of Sprengel and De Candolle, although it is indigenous throughout the whole extent of the Calabrias. The Bark, or, what is preferable, the Root of the Tree, affords a substitute for Peruvian Bark, but its chemical analysis, by Signor Seniola, does not state what proportion it contains of the principle which constitutes the efficacy of the other, and, therefore, does not enable us to form a comparison between them. It is a remedy against the attacks of "mal aria," which desolate the coasts of Calabria; and the bounty of Providence has rendered it indigenous to those countries where it is peculiarly required, and where many of the poorer classes might perish, through their inability to procure a more expensive medicine. Perhaps it might also be found that the GEUM *urbanum*, or other Plants, which could supply the place of Peruvian Bark, grow in the greatest abundance in the districts that are subject to Agues, and other maladies which are cured by that remedy, and might be cured by such as are similar to it in their nature.

Dr. Berthelot, of Teneriffe, has favored us with notices on four medicinal plants which grow in the Canary Islands, on the FORSKOLEA *angustifolia*, which is reputed to be much more efficacious than the PARIETARIA, and which could be employed as a substitute for Sarsa-

parilla; and which might be cultivated in this Country; on the *CNEORUM pulverulentum*, which was found by Broussonet to possess properties even more active than those of Peruvian Bark, and to have cured intermittent fevers in which the other had been administered without success; on the *ECHIUM giganteum*, of which the macerated leaves are used to dissolve purulent tumours; and on the *TEUCRIUM moschatum*.

Dr. Cottereau, of Paris, has communicated a Paper on the medicinal properties of several species of *EQUISETUM*, which are considered as troublesome weeds, and are very difficult to eradicate. He thinks that the diuretic qualities of these Plants are inferior to those of others, and are found principally, as Dr. Parmentier thinks also, in the Species which is termed *sylvaticum*, although Dr. Lenhosseck, of Vienna, was of opinion that the Species *hyemale* and *limosum* are much more powerful, and might even produce *Hæmaturia*. He concurs, however, entirely with Dr. Lenhosseck, in recommending a Decoction of the dried Plant in preference to that which is prepared from the Plant when fresh, and which occasions nausea; but no sensible difference was remarked by Dr. Cottereau, in the Extracts of one and of the other. As some species of *EQUISETUM*, such as the *arvense* and the *minor*, were considered to be *astringent*, and the *fluviatile* to be also *vulnerary*, the Plants of this Genus seem to require further investigation, and we should be happy to receive from Dr. Cottereau, the results of the inquiries which he intended to make on their therapeutical history, and from Dr. Lenhosseck, a statement of his own observations upon them.

From Mr. Hardy we received the Specimens that Señor Maldonado, of Cuba, had the goodness to send, of some

medicinal Plants which are found in that Island, and which, in a very curious Paper that accompanied them, he designates by their popular appellations; but the specimens will, I earnestly hope, enable some skilful Botanist to determine with precision their scientific names. This is the more desirable, as some of them appear to be very valuable and important; and amongst others, there is one which is called *Donna Anita*, and in other places *La Sandoval*, and which, though “it had hitherto not been used in “medicine,” was found to produce very powerful effects. It accomplished, in the course of six hours, and in the case of a Child whose situation was considered hopeless by the Physicians, a complete cure of the putrid fever with which the patient was afflicted, and operated in procuring a sound sleep, attended with copious perspiration. Administered in doses of from three to fifteen grains, it had cured of fevers several other patients, and it restored to health, by acting as an Anthelmintic, a female advanced in years, who was dangerously ill. I very much wish that a careful analysis were made of the specimen which we received of this very extraordinary Plant, and that Señor Maldonado would favor us with a statement of the pharmaceutical preparations by which it could preserve its virtues, and be employed in other countries. The Leaf of this Plant, which is extremely bitter, is powdered and given in Pills; but in one case he employed the Juice, from which an Extract might be made. He mentions, also, a Plant, which has the popular name of *Baquey*, and another, which is said to possess similar qualities, and is called *Ponosi*. The former appears to be of very great service in some female complaints, as well as in tumours; and he gives a very remarkable instance of the effects which were produced in a case of the latter description.

He confirms the statement which we had previously received respecting the efficacy of the *MIKANIA Guaco*, as an antidote against the bite of Serpents; and this very important fact was originally discovered by mere accident, in remarking that a Bird, called the *Guaco*, which had been bitten by one of them, flew to the Plant, and after rubbing itself upon its leaves returned to attack the reptile. This affords an additional proof of the great benefit to be derived from an attentive observation of the works of Nature, which are no less instructive than interesting. So impressed is the Author with the utility of this Plant, that he has employed five Acres of Land in its cultivation. The Plant might, as he very properly suggests, be tried as an antidote in Europe, against the bite of Vipers, and he thinks that its best preparation would be in the form of an Extract. The same trial should, I think, be made also with the *POLYGALA Senega*, which is employed in North America, against the bite of the Rattle Snake, and in this country for medical purposes of another nature. Nor is this the only virtue, valuable as it is, which is ascribed to the *MIKANIA Guaco*, for it appears, by the statement of the author, that an Infusion of the Leaves in Water is very beneficial in cases of Diarrhoea, and that by taking internally a Decoction of the Leaves, and by using it also as a Bath, three persons recovered, in a very short time, the use of their limbs, of which they had been deprived during seven or eight months, in two cases by Rheumatism, and in the other by Palsy. He states that it has been found to be very useful in the cure of fevers, for which he particularly recommends a mixture in equal quantities of the *MIKANIA Guaco*, of the *Donna Anita*, of the *Baquey*, and of the *Ponosi*, reduced to powder, and of this mixture a scruple is boiled in a cupful of

water, and taken morning and evening. A single dose of this remedy cured two other patients, although, in all the four cases, the Sulphate of Quinine had been given without any effect. Lastly, he informed us, that the Plant which is called *Anacahuita*, and which is indigenous to Mexico, is very useful in cases of Pulmonary Consumption, and he transmitted to us a parcel of the Leaves, of which a Decoction is given in that disorder. All this affords abundant materials for future observation and inquiry, by those who may visit those regions, and who, by obtaining additional information of a medical as well as of a botanical nature, with respect to these plants, will gain great honor to themselves, and will confer a benefit, not only upon this Society, but also upon all those who are interested in its pursuits, and upon mankind, which may derive much advantage from these investigations. This may, perhaps, be in the power of our late Secretary, Mr. Yosy, of whose valuable and meritorious services we have unfortunately been deprived, in consequence of his intention of proceeding to the new world on scientific and other objects, and of whom, I am upon this as upon every occasion, desirous of expressing my sincere respect.

Sir John Sinclair, who has so honorably devoted a long life to objects of great utility, which he still continues to pursue with activity and zeal, has, in a Paper that was communicated to this Society, called our attention to the investigation of the qualities of Marine Plants, about which, I believe, that little is at present known, although they seem highly deserving our notice from the qualities which some of them have been found to possess.

Mr. Mudie, in an interesting Paper "on the Medicinal Products of Australian Plants," has informed us that the principal substances which that vast Continent exhibits

to the researches of Medical Botany are Oils, which are chiefly obtained from the numerous species of the Genus MELALEUCA, and Gums and Resins, which are yielded by the stem of some Trees which he mentions; and by exudations from the Bark of the ACACIA, and of the EUCALYPTUS, from the latter of which is procured a Gum like Kino or Myrrh. There is, however, a species of EUCALYPTUS (the *mannifera*), which seems entitled to particular inquiries, as he states that “it affords a substance of which the medicinal properties have been tried in Australia, and which, should it be found to suffer no injury or decomposition during the voyage,” might serve as a substitute for Manna, as it does not appear to be very different from that which is produced by the FRAXINUS, on the Coasts of the Mediterranean. He adds, that at the close of a long drought it is found in such abundance, lying on the ground under the trees, “that several pounds may be collected by one person in a few minutes.” I trust that he will have the goodness to transmit to this Country a specimen of this substance, in order that its qualities may be carefully analyzed, and that it may be ascertained whether or in what degree they have been affected by the Voyage.

Dr. William Hamilton, of Plymouth, who is a very useful Corresponding Member of this Society, and from whom, I hope, we shall be favored with many communications, sent to us a Paper on the PISCIDIA *Erythrina* of Jamaica. A Tincture, prepared from the Bark of the Root, was found by him to have a very powerful operation as a soporific medicine, and was used with great success as a topical application for carious Teeth, as he “never knew an instance of a return of pain” after it had been employed. He suggests, in that Paper, a number of curious and interesting trials with respect to the Bark, and to the

Tincture, and to the precise period at which the former should be gathered ; a circumstance which his experience has shewn him to be of very great importance. In a Letter which he had the goodness to address to me on the *ARGEMONE Mexicana*, which is found in very great abundance in the West Indies, he states that its seeds yield an Oil which is “valuable as an active, and yet at the same time gentle purgative,” possessing also anodyne qualities, and usually administered in a dose not exceeding thirty Drops, and that dose, which is nearly as powerful as an ounce of Castor Oil, is represented by Practitioners to allay immediately the pains of colic. In his opinion, the Oil produced from the Seeds or Nuts of the *HURA crepitans*, which is so common in those Countries, would be found also to be a “most valuable Purgative.”

Mr. Houlton, who is a very distinguished Member of this Society, and is now, I am most happy to say, become a Member of the Council, has promoted our views by the communication of some very curious and valuable Papers. I shall hereafter have occasion to refer to that which he wrote on the Extracts of *CONIUM maculatum*, and of *LEONTODON Taraxacum* ; and I would strongly recommend trials to be made of the latter, prepared, as he desires, by spontaneous evaporation, and from the Juice obtained by bruising and pressing the Roots, collected in the month of August, when he found that one pound of the fresh Roots yielded six ounces of Juice, from which two ounces of Extract were obtained. I recommend these trials, not because I entertain any doubts upon the subject, but for the contrary reason, because I am, if I may venture to offer any opinion, deeply impressed with a sense of the importance of that medicine, and am, therefore, extremely desirous that it should be duly appreciated, and

that its virtues should be generally known. An eminent Lecturer on the *Materia Medica*, who wrote to Mr. Houlton upon that Extract, states, that in some cases he “found it more serviceable than any other preparation;” and I trust that it may, in such cases, supersede others which are less innocent in their nature, and less safe, though not more salutary in their operation.

One of his Papers relates to the *STACHYS palustris*, which he discovered to be an esculent vegetable, and he obtained, in consequence, a Medal from the Society for the encouragement of Arts, Manufactures, and Commerce. Considered merely as an esculent, it does not come within the scope of our inquiries; and I wish that Mr. Houlton would employ his talents, which he devotes to objects of great and general utility, in examining this Plant, with reference to the virtues which it was supposed to possess as a vulnerary, and for which it was so much extolled by Gerarde, who mentions extraordinary cases of its efficacy.

The other Paper of Mr. Houlton is on the *CHENOPODIUM olidum*, which Dr. Cullen stated to have been “frequently employed with advantage in hysterics and spasmodic complaints,” and of which the immortal Boerhaave observed that its Leaves, externally applied, were also useful in promoting suppuration. Mr. Houlton remarks, that it is “still in high estimation amongst the common people in all chronical affections of the Uterus;” he found it to be of great service in two cases, and believes it to have “a very decided action upon that organ.” He is inclined to think that it may have fallen into disuse among medical practitioners, from the circumstance which was noticed also by Dr. Cullen, that it does not retain its properties when dried. To remedy this inconvenience he prepared an Extract, which will keep for a year and preserve

its sensible qualities, and he gave in that Paper a statement of the manner in which it was obtained, and sent a specimen to the Society. It appears extremely desirable that, at the proper season, in the month of July or August, an Extract should be made of the Plant, according to his directions, and that its efficacy should be submitted to trial in a variety of cases.

Dr. Hancock, to whom I had at the last Anniversary the honor of presenting the Gold Medal of the Society for his valuable discovery respecting the *Angustura Bark Tree*, has communicated a Paper on a species of ARISTOLOCHIA, which is known by the popular name of *Buhyari*, and is an aromatic bitter that has been found of great advantage in Dyspepsia, and also in hepatic affections, operating, in moderate doses, as a salutary tonic, and in larger quantities, as a sudorific. This Plant, which was also “employed with success in cases of emaciation and sup-
“posed Consumption of the Lungs,” was administered in an infusion, of which a wine glassful was taken three times a day; and the Infusion was prepared by pouring a quart of hot water upon an ounce of the stem, cut into small pieces, and adding some Brandy or Rum to prevent decomposition.

It remains for me to speak of an admirable Paper of Mr. Twining, at Calcutta, of which the first part was read at a Meeting of this Society, and will be found, from its merits and importance, to be eminently entitled to the Gold Medal, unless it should already have been published, a point upon which we are not at present informed. It relates to a species of ASCLEPIAS, which is common in Hindoostan, where it is known by the name of *Madar*, and is an active, valuable, and safe medicine, that may be employed in many cases of chronic disease. The milky

juice of the Plant operates as a violent cathartic, but is used externally to promote suppuration, and for the cure of the *Herpes Serpigo*, as the leaves are also in cases of Rheumatism. The dried Flowers, and the inner bark of the Root, in powder, are considered of service in *Anasarca* and the *Ascites* of mere debility; and its Root, in powder, is also administered in eruptions and other complaints. It thus appears that several parts of the Plant are medicinal, but Mr. Twining employed only the inner bark of the Root, in powder; and the complaints in which it was attended with success (though in many instances they had long remained intractable and had resisted other Medicines) were Ulcers, even such as were attended with Caries of the Bones, Cutaneous Eruptions, and Nodes, or a thickened state of the Periosteum. It was given in small doses, sometimes of one or two grains, and was most effectual when the patient had no febrile tendency, was not of a plethoric habit, and adopted a proper regimen. The author relates, with a minuteness and accuracy which are as honorable to himself as they are satisfactory to others, the symptoms and treatment of nine cases in which *Madar* was administered alone, and of seven in which it was combined with Sarsaparilla, which “assists, modifies, and directs” its effects, and promotes the cure by preventing or diminishing the irritability of the Constitution. It had been tried with success in thirty-five cases by Mr. Twining, and in twenty-one cases by Mr. Egerton, Surgeon to the Eye Infirmary at Calcutta; and the ten cases, in which it was given by the former without benefit, were of patients who were plethoric, inclined to fever, or of an irritable habit. The Author gives, also, the analysis of the *Madar* Powder, which can be procured from Mr. Mackenzie, No. 78, Cornhill. It is difficult for me to eulogize, in adequate

terms, the interesting and most excellent Paper of Mr. Twining, who has treated the subject so clearly and so copiously, has shown such candour in all his statements, and has made such numerous and satisfactory trials, of which he has given such valuable reports, that he deserves the utmost praise ; and I congratulate very sincerely this Society on the advantages which it must derive from a Member who is so able, and has proved himself so willing, to promote its views.

It may appear superfluous to make any observations upon the real nature and genuine objects of this Society ; but it is, in every case, of extreme importance that the means which we employ should be adapted to the end which we propose, and that our attention should be steadily devoted to our designs, without being diverted from them by secondary or collateral inquiries. I wish that no Member of this Society may entertain erroneous opinions upon this subject, that our views may not be misconceived by the Public, and that it may not be supposed that they are confined, or even that they are principally directed to botanical researches, or are to be attained by collecting and by studying Herbaria and Works on Botany. We are not a botanical Society, and we have never wished or attempted to emulate the example of the Linnæan Society, which was established for the investigation of Botany, and of other branches of Natural History, and has, by its Charter, obtained privileges with which we ought not to interfere. We are primarily and essentially a medical Society, which pursues Botany so far, and so far only, as may be requisite for its object of examining and ascertaining the medicinal properties of Plants, and which, for the same purpose, is assisted by Chemistry. Botanical analogy or Chemical analysis may, as I remarked on a

former occasion, guide, in some cases, your inquiries, but the one, as well the other, would be of little or no avail without the test of actual experiments, cautiously made and carefully recorded. It cannot be too frequently repeated, it cannot be too forcibly impressed upon your minds, that without such experiments this Society cannot be successful, cannot acquire that fame and reputation which would eminently promote its prosperity, and cannot confer upon mankind those benefits which I most anxiously and ardently desire.

With respect to our indigenous Plants, which ought to be the first, and are, I think, the most interesting object of our researches, and particularly with respect to such of them as are found in abundance, and which appear, therefore, to have been designed by Providence for purposes of great utility, their botanical characters are already well known, and Botany could be of service only in determining the analogy which exists with others that have been ascertained to be medicinal, or in affixing the scientific names to Plants, which in different districts may receive various popular appellations. With respect to other Plants, and especially to those which may have been recently discovered, Botany is also of service, by defining the precise difference that exists between a Plant that is employed for medicinal purposes, and other Plants which are nearly allied to it in their character. In the one case, as well as in the other, Botany is only an auxiliary, and cannot be justly viewed in any other light. I do not make these observations to disparage Botany, of which I duly appreciate the value, but to dissuade you from directing your attention and exertions to objects which are solely of a botanical nature, and from attaching too much importance to exotic plants, to the neglect of many which we find in

this country, and which are not indeed rare or curious, but are probably more suited to our use.

Of still greater value is Chemistry, particularly when applied to one of its most useful and important branches—pharmaceutical preparations. One of the points which would deserve the investigation of this Society is, to ascertain, by chemical examination, and afterwards by actual trial with respect to every medicinal Plant, and especially with respect to any Plant of which the virtues may be newly discovered, in what part of it are to be found; principally, those properties for which it is employed. We know that, in some Plants, different parts possess different qualities, totally dissimilar in their nature, and it may easily be supposed, that a property, even when it is found in every part of a Plant, may, however, prevail in a greater degree in one part of it than in others. As every Plant cannot always be procured in a fresh state, it appears also very requisite to ascertain which of its medicinal parts can be best preserved; in what manner the decomposition of them can, in some degree, be prevented; whether the Juice, when reduced by gentle heat to an inspissated Jelly or Roob, continues to be possessed of its original properties; and whether the Roots and Leaves should be kept, as may be done for many months when they are dried, or whether Extracts should be prepared from them when they are fresh. It was found, by Mr. Houlton, and mentioned by him in one of his Papers which was read before this Society, that the Extract of *CONIUM maculatum*, which he prepared by spontaneous evaporation, had been kept for two years with very little change in its sensible properties, and that he was convinced of its decided superiority over that which is usually made. He is of opinion, that the mode which he recommends will produce an Extract

always uniform in its nature, and will prevent the accidents which occur in the other process. I lately brought from Germany, and had the pleasure of presenting to this Society, a very elaborate Dissertation in Latin, by Dr. Geiger, on the analysis of the *CALENDULA officinalis*, which the Author considers to be one of those common indigenous Plants that have unjustly fallen into disrepute, although it is supposed to be the same that was praised by Dioscorides for the cure of Steatoma. In that Dissertation, the learned Author, who with the most laudable industry and perseverance had made, with respect both to the Flowers and to the Leaves, a number of experiments, the results of which he has minutely described, arrives at the conclusion, that the *CALENDULA* is certainly one of the most efficacious medicines, and makes an observation of the greatest importance, “*cunctas plantas cumprimis azotum*” “*continentes aut nutrientissima aut efficacissima medica-*” “*menta præbere.*” This principle may, I flatter myself, be of the utmost service in the chemical analysis of Plants, respecting which I most earnestly wish that many other Works existed similar to that of Dr. Geiger. He recommends a strong Galvanic Battery as of the greatest utility in that analysis, for which he represents it to be “*quam*” “*maxime aptam,*” and this remark ought to receive due attention in prosecuting such inquiries. The proper time of gathering the Leaves of the *CALENDULA* is stated to be before the appearance of the Flowers; and Dr. Geiger observes, that the parts of Plants are found, at a precise period which he describes as that “*maximæ actionis vitalæ*” “*sive summæ evolutionis,*” to be peculiarly endowed with the properties which they possess. I understand this observation to apply to Flowers at the time that they are in full bloom, and to Fruits at the period of their perfect

maturity; but with regard to the Roots of Plants, it is remarked by Mr. Houlton, in treating of the Extract of the LEONTODON *Taraxacum*, that “its excellence depends upon the season in which the Root is gathered;” that in the month of August “the Root is full of the *succus proprius*,” but that the Extract “prepared in March has very different sensible properties and no appreciable medicinal virtue.” When the Root is gathered at a proper season, and an Extract is prepared from its Juice by spontaneous evaporation, it was found, by Mr. Houlton, to be a “very efficacious medicine” in chronic derangements of the Liver and of the Stomach; and it appears, by a Letter addressed to him, to deserve fully the commendations which were bestowed upon it by the late Dr. Pemberton, and that it was used with great success as a “most excellent deobstruent” in hepatic affections, although the Extract, as commonly prepared, had disappointed the expectations that were formed of it. On the chemical analysis of Medicinal Plants, and on the proper mode of conducting it, you will find very valuable observations in a Paper by Dr. Fromherz, Professor of Chemistry, which I have also presented to this Society, and which, as it is in the German language, it would be desirable to translate for general use in this country.

I have said, that I consider our indigenous Plants to be the first and most interesting object of our researches, and I need not remark, that the advantage of procuring them genuine, and in a fresh state, and at a small expense, is of very great importance, and that they may be supposed to be more peculiarly adapted to the diseases of the same climate than those which are brought from remote regions. The medicinal plants which grow in other countries, but which seem to be suited to our soil and climate, might

perhaps be reared in it without difficulty ; and experiments of this nature would, in my opinion, be the best employment of the Botanical Garden, which Mr. Gibbs, our Treasurer, has with so much kindness and liberality appropriated to the benefit of this Society. It would, I think, be unnecessary to use that Garden as a receptacle for such indigenous medicinal Plants as are generally known, but it would be of eminent service by the distribution of the Seeds or Cuttings of foreign medicinal Plants, which might be cultivated there, and which might, upon trial, be found to possess the same properties as those that are imported. We have learned that one of our Members, who reflects much honor upon this Society, Mr. Aiton, of the Royal Gardens at Kew, has established there a Garden for Medicinal Plants, that he has already placed in it all those which are received into the English Pharmacopoeia, and that he will permit all persons to have access to it who apply to him for the purpose. The merits and talents of Mr. Aiton are such as render altogether superfluous any eulogium which I could offer ; and I will only observe, that he has upon every occasion deserved the gratitude of this Society, and that, by the institution of a Medico-Botanical Garden under his auspices, he has conferred a most important benefit upon all those who study either Medicine or Botany, or are desirous to promote those Sciences. We were also informed that, with the same laudable zeal for the cultivation of Medicine and Botany, the Society of Apothecaries had opened its Pharmaceutical Garden at Chelsea for the admission of Students. A Garden would, however, be very useful in which experiments might be made to cultivate the medicinal Plants of other countries, and from which their Seeds or Cuttings might be distributed gratuitously to those persons, and to

those only, who are Members of this Society. For instance, the *BALLOTA lanata*, which grows in Siberia, and is represented as very efficacious in the cure of Dropsy, might perhaps be cultivated in this country, if the same properties should not be found to exist in another species which is a common indigenous Plant.

Although the medicinal properties of many of our indigenous Plants are, in some degree, known, it must not, however, be supposed, that further investigations respecting them would be unnecessary or superfluous. The forms in which they ought to be exhibited, and the doses in which they ought to be administered, are not, in most cases, defined, nor are their particular modes of action fully and satisfactorily stated. Gray, in his Work on Pharmacology, enumerates many indigenous Plants which have laxative properties, but does not specify whether they have any other, and what action, or whether they operate simply as propellants, and therefore the disorders to which some of those Plants may be peculiarly adapted are not described. Such is the admirable order which Providence has established in the creation, that every production has its own properties and uses; and it cannot be thought that all the Plants to which I have just referred are exactly similar in all their qualities, or should be administered alike in all cases in which laxative medicines may be required. It is by distinguishing the precise mode of action of each medicinal substance, by defining its use, and by determining its application in each particular case, according to the nature and symptoms of the malady, that the Physician is guided in his Prescriptions. To speak only of those laxative medicines which are yielded by vegetable substances, we all know that Scammony could not with propriety be administered in every case in which Manna or

Jalap might be given, and that the qualities of Rhubarb, for example, are very different from those of Senna. We may conclude, by parity of reasoning, that similar differences may exist with respect to those indigenous plants which are already known to possess in common a medicinal property, and we perceive, that even with respect to such plants there is a wide field open to the exertions of this Society.

Upon examining some foreign Pharmacopoeiæ which I have had the pleasure of presenting to this Society, and which I would recommend to your attentive perusal, it will be perceived that the Austrian Pharmacopoeia contains 71 Plants,* which I do not find in the Pharmacopoeia of

* *Aesculus hippocastaneum.*

Achillea millefolium.

Amygdalis Persica.

Angelica Archangelica.

Arctium Bardana.

Arctium Lappa.

Arnica montana.

Artemisia Abrotanum.

Artemisia santonicum.

Boletus fomentarius.

Boletus igniarius.

Cannabis sativa.

Chenopodium ambrosiodes.

Cochlearia officinalis.

Cucurbita Pepo.

Curcuma longa.

Famaria officinalis.

Geum urbanum.

Glechoma hæderacæa.

Gratiola officinalis.

Hyssopus officinalis.

Illicium anisatum.

Imperatoria Ostruthium.

Juglans regia.

Lactuca scariola.

Ledum palustre.

Lichen parietarius.

Lichen rocella.

Ligusticum Levisticum.

Loranthus Europæus.

Lycopodium clavatum.

Lythrum salicaria.

Matricaria Chamomilla.

Melilotus officinalis.

Melissa officinalis.

Mentha aquatica.

Mentha crispa.

Ononis spinosa.

Orehis mascula.

Orchis morio.

Phellandrium aquaticum.

Pimpinella Saxifraga.

Pinus Larix.

Polygala vulgaris.

Potypodium vulgare.

Prunus Cerasus.

Prunus Lauro-Cerasus.

Prunus spinosa.

Pulsatilla pratensis.

Ribes rubrum.

the Royal College of Physicians. Of such Plants there is an additional number of 31 in the Bavarian Pharmacopoeia,* which appears to me admirably arranged, and of 29 in the Prussian Pharmacopoeia ;† making a total of 131, of which

Rhus Cotinus.

Rumex acutus.

Salvia officinalis.

Sambucus Ebulus.

Saponaria officinalis.

Satureja hortensis.

Scabiosa arvensis.

Symphytum officinale.

Tanacetum vulgare.

Teucrium Scordium.

Theobroma Cacao.

Thymus Serpyllum.

Tilia Europæa.

Triticum repens.

Urtica dioica.

Veratrum Sabadilla.

Verbascum phlomoides.

Verbascum thapsus.

Veronica officinalis.

Viola odorata.

Viola tricolor.

* *Anemone pratensis.*

Antirrhinum Linaria.

Apium petroselinum.

Arundo phragmites.

Berberis vulgaris.

Calamus Rotang.

Capsicum annuum.

Carex arenaria.

Carlina acaulis.

Ceramium helminthochorton.

Ceratonia siliqua.

Centaurea benedicta.

Chelidonium majus.

Clematis erecta.

Convallaria majalis.

Lawsonia inermis.

Maranta Galanga.

Mesembryanthemum crystallinum.

Ocimum basilicum.

Plantago Cynops.

Prunus padus.

Rhus radicans.

Scandix cerefolium.

Secale cereale.

Sedum acre.

Sysymbrium Nasturtium.

Teucrium chamædris.

Teucrium chamæpitys.

Teucrium marum.

Vicia Faba.

Zizyphus vulgaris.

† *Achillea ptarmica.*

Althæa rosea.

Amomum curcuma.

Amomum Zedoaria.

Amyris Zeilanica.

Aristolochia rotunda.

Arum maculatum.

Athamanta oreoselinum.

Bryonia dioica.

Calophyllum Tacamahaca.

Croton lacciferum.

Dictamnus albus.

64 are indigenous to this Country. Of 234 Substances which are enumerated in the Austrian Pharmacopoeia, 174 are vegetable; and it is well known that the vegetable kingdom furnishes a much greater number of medicinal substances than any other. Amongst the indigenous Plants which are received into these Pharmacopoeiæ, but not into ours, is the common Lime Tree, which, in some English Works on Medical Botany, is not even noticed as being possessed of medicinal qualities, but of which I have, on several occasions, experienced the salutary effects as a mild Diaphoretic; the *ACHILLEA millefolium*, of which a Decoction is administered internally for the cure of Hæmorrhoids, and is said to be of very great service in that complaint, and of which the Root was considered by Gray to be a substitute for Contrayerva; and the *PHELLANDRIUM aquaticum*, which I find to have been prescribed by the celebrated Hufeland. These Pharmacopoeiæ exhibit additional proofs, if indeed any could be requisite, of the value of several indigenous plants, which may be of great utility in the Materia Medica, even when they only afford satisfactory substitutes for others which are of foreign growth, and which are always more expensive and often less genuine than those which we could procure at home.

Epidendron Vanilla.

Ferula Persica.

Geoffroya inermis.

Hypericum perforatum.

Linaria vulgaris.

Laurus pichurim.

Origanum Creticum.

Origanum majorana.

Pæonia officinalis.

Pyrethrum Parthenium.

Pyrus malus.

Rhododendron Chrysanthum.

Scorzonera Hispanica.

Strychnos nux vomica.

Thuja articulata.

Thymus vulgaris.

Viscum album.

The Plants of which the Names are printed in Italics are indigenous to this Country.

One of the most important and beneficial discoveries which could be made by this Society would be of Plants, by the operation of which the diseased organs might be primarily affected in the same manner as the action of the *DIGITALIS purpurea* appears to be directed to the Heart, and that of the *CHENOPODIUM olidum* to the Uterus. With respect to the latter, I have already noticed the interesting and valuable Paper with which Mr. Houlton has favored the Society; and a Member of this Society, who has devoted great attention to Medical Botany, and has published a Work upon the subject, has made some experiments with the Extract of that Plant, and will, I trust, communicate to us the results. This Plant, which is often treated as a Weed, and allowed to decay on the places where it grows, may probably afford a substitute in complaints of the Uterus, to the Ergot of Rye, which is extremely expensive. Might we not hope, if a medicine could be found of which the action were directed to the Lungs in a diseased state, that it would be possible to cure Pulmonary Consumption, which is so insidious in its origin, so dangerous in its progress, and so destructive in its effects? Such a discovery would deserve a public reward, and would justly entitle its author to the gratitude of mankind; and the trials which would be requisite for the purpose might be made without danger in those advanced stages of the disorder in which it is considered to be incurable. Upon this point I would call your attention to a Plant, mentioned in a Work which I recently procured in Germany, and which was published last year at Leipzig. The Plant is termed by the Author, *GALEOPSIS grandiflora*, and appears to be the *GALEOPSIS ochroleuca*, or *villosa*, which is indigenous to this Country, and a Decoction of the Flowers and of the Leaves is given in cases of Consump-

tion. He states that this Plant is much employed as a popular remedy, and its efficacy ought to be submitted to actual trials in a variety of cases. I think that Experiments may properly be made with respect to any of those vegetable substances, which, though they are not professionally prescribed, are, however, used as popular remedies in several Districts, from an experience, or even from an opinion of their virtues ; and, also, but with more caution, with respect to other vegetable substances which, from botanical analogy and from chemical analysis, may be considered as medicinal.

Another most important discovery would be, that of a vegetable substance which would have a specific action on the Liver, and which would cure, without the assistance of mercurial preparations, the diseases of that organ. The deleterious effects of some of those preparations on the general health, and on the vital powers, are too well known, and have been too generally experienced to require any observations from me ; and you will concur in my opinion, that a substitute which might be found for those remedies, and which could be administered with safety in other respects, would be of great benefit to mankind. The mineral waters of Carlsbad, in Germany, have very long possessed much reputation in the cure of disorders of the Liver, for which they have been found, by experience, to be eminently efficacious ; and they do not appear, by chemical analysis, to contain any portion of Mercury. It cannot, therefore, be justly contended, that Mercury is the only specific for such disorders ; and I speak from the authority of a most eminent Physician in this Country, when I state that, in his judgment, there is no medicine which is so much misused as Calomel. Although Mercury forms no ingredient in the composition of the Carlsbad Waters,

I am ready to admit that, in addition to those substances which have been found in them by analysis, such as Soda, Glauber Salt, common Salt, &c., they may contain some others, which, from the peculiarity of their nature, may not be discovered by the art of Chemistry, and which may greatly contribute to their salutary effects. A very remarkable instance of this is exhibited in the Waters of Gastein, which are also in Germany, and which are of extraordinary and indeed surprising efficacy in the cure of contractions, even of such as are the most inveterate, although those Waters appear by analysis to contain only substances so insignificant in their nature, and in such very small quantities, that some Physicians have considered those Waters to operate only from their heat, which, when they rise from the spring, is stated to be 38° of Reaumur, or 118° of Fahrenheit. A German Physician, for whom I entertain the highest respect, related to me from his own personal observation, a most remarkable cure, from the use of the Gastein Waters, of a distortion of the limbs which had existed from infancy; and he had communicated a report of it to the Academy of Medicine at Paris, of which he was a Member.

It appears also very desirable to investigate accurately the nature and properties of the *COLCHICUM autumnale*, and to ascertain whether it will dispel a fit of the Gout; whether it ought to be taken in small doses, as was done by Sir Joseph Banks, to serve for an alterative, and to prevent the recurrence of a fit; and in the one case, as well as in the other, to discover in what manner it ought to be prepared and administered, or with what other medicines it ought to be blended, in order to secure the Patient from any deleterious effects. The Medicine which is supposed to be made from it is known to be very potent; but, in chronical dis-

orders, the potency of a remedy may not be so important as its safety; and the effects, when they are slow, may not be the less certain, and seem more congenial to the course of nature, which, in the formation and developement of vegetables, as well as of animals, advances gradually in its work, and with that admirable order and arrangement which exemplifies, in every case, the infinite wisdom and goodness of Divine Providence.

I would take this opportunity of soliciting your attention to the *LACTUCA virosa*, which is indigenous to this Country, and which, though it is not admitted into the London Pharmacopoeia, nor into the others of which I have before spoken, is, however, represented to be a specific for the cure of the *Angina pectoris*. I find by the German Work, which I have already mentioned, that sixteen drops of the Extract of that Plant are mixed with two drams of Cinnamon Water, and that the dose is fifteen drops, to be taken every two hours. The *LACTUCA sativa* is received into the London Pharmacopoeia, and the *LACTUCA scariola* into the Austrian Pharmacopoeia; and the virtues of the former are generally known, but for very different purposes. The same Work has also informed me, that the Roots, in Powder, of the *ARTEMISIA vulgaris*, which is common in this Country, were prescribed by Burdach, for Epilepsy and nervous disorders, such as the St. Vitus' Dance, &c. This Plant, although it appears to have been formerly in great repute, is not found in any of the Pharmacopoeiæ to which I have referred; and I have selected it, as well as the other, from a great number which are contained in that German Work, because both of them are administered either simply, or accompanied with active medicines, so that the effects which they may produce cannot be ascribed, as in the case of compound remedies, to

the mixture of several ingredients. The Extract of *LACTUCA virosa*, which is stated to be “narcotic, laxative, “and powerfully diuretic,” and to have been given in Dropsies, is indeed blended with Cinnamon Water, which may, perhaps, be added to improve the taste, but cannot, I believe, be considered as tending to produce the effects that have been found to result from the Medicine.

You will not, and indeed you cannot, suppose that I am guilty of the vanity and presumption, which I should think unpardonable, of giving any opinions of my own, if even I were competent to form them, upon these Plants, or upon any medical question to which I have directed your notice. Upon every subject that is connected with Medicine, it behoves me, who am not of the medical profession, to speak with the utmost diffidence and humility; and as I have now the honor to speak in the presence of some who are eminently distinguished in that profession, and who unite the advantages of great personal experience, with those which they have derived from the study of medicine, I feel the more sensibly my own deficiencies, and find it the more requisite to solicit your indulgence. As I am, and shall always continue to be animated with an ardent zeal for your prosperity and success, I have considered it to be my duty to submit to you some of those suggestions, which, I flatter myself, may be useful in your researches, and, amidst the variety of objects which might attract your attention, to recommend some practical inquiries which appear to be of great importance and advantage, and which, if their results should realize your wishes, and my own, would very much promote the fame and reputation of this Society, and thereby extend the sphere of its activity. Here I must again repeat, that actual trials of vegetable substances are indispensably necessary for your designs, in

which you would otherwise fail, however learned, however laborious might be your theoretical and scientific investigations. You know that the virtues of the Peruvian Bark were first discovered by accident, that further experience confirmed the knowledge which was thus acquired of its salutary effects, and that it would not otherwise have been considered as belonging to the *Materia Medica*, or received into any *Pharmacopoeia*, although the most elaborate disquisitions had been written upon its botanical analogy, and the most accurate examination had been made of its chemical constituents. The trials which I so strongly recommend cannot be conducted properly, or in a satisfactory manner, except by those who belong to the medical profession; and in this, as indeed in every respect, their assistance will confer inestimable advantage upon this Society. The most signal benefits may confidently be expected from the influence and example of my revered friend, the President of the Royal College of Physicians, who is the ornament of his own profession, and who, with a laudable zeal to promote your interests, has most kindly consented to become a Member of your Council, and has thus conferred upon us a favor which we cannot too highly prize, and cannot too gratefully acknowledge.

Allow me to take this opportunity of earnestly exhorting you, though in language less energetic, and in a manner less impressive than the importance of the subject would require, to prosecute your inquiries, with a steady and undeviating attention, to their ultimate object, which is of a practical and not of a theoretical nature, to extend them far beyond mere botanical examination, and even beyond chemical analysis, to subject the medicinal qualities of vegetable substances to the unerring test of experience, by actual trials, made by those Members of the Medical Pro-

fession, whom we have the happiness and honor of seeing associated with us in this Society; and to recollect, always, that as our views are directed to general utility, we ought first to investigate the qualities of those Plants which, in that respect, are justly entitled to the preference. It is by these means, and by these only, that you will succeed in attaining the useful and most beneficial objects which you have in view, and which no person has more at heart than the individual who now addresses you; and that you will receive, as I fervently hope may be the case, increased support and encouragement from the world, for in this, as well as in other instances, the Tree will be judged of by its Fruits.

FINIS.



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